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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,142

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Wolfgang Mueller

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EXAMINER

CHEN, XIAOLIANG

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,142	<b>Applicant(s)</b> MUELLER ET AL.	
	<b>Examiner</b> XIAOLIANG CHEN	<b>Art Unit</b> 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 14-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7-31-06, 2-26-07</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Preliminary Amendment*

1. Claims 1-13 are canceled.
2. Claims 14-27 are added.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14, 17-20, 22-24 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurashima et al. (US5596665).

**Re Claim 14**, Kurashima et al. show and disclose

A device for a shakeproof accommodation of at least one of an electrical special component and an electrical circuit, comprising:

a carrier (7, fig. 2) onto which a circuit substrate (8, fig. 2) having the special component (3, fig. 1) fastened thereon is mounted in an electrically insulated manner at least over a partial surface (fig. 2).

**Re Claim 17**, Kurashima et al. show and disclose

The device as recited in Claim 14, wherein the circuit substrate includes one of a printed-circuit board, a flex foil, a ceramic, and a wire harness (a circuit board 8 [col. 2, line 13]).

**Re Claim 18**, Kurashima et al. show and disclose

The device as recited in Claim 14, wherein the carrier has passages (along edge of 15, fig. 2), for contact pins (43, fig. 2) that pass through.

**Re Claim 19**, Kurashima et al. show and disclose

The device as recited in Claim 14, wherein the circuit substrate fastened to the carrier is able to be connected to a control unit (of an optical communication system [col. 1, line 8]) via pins (43, fig. 1).

**Re Claim 20**, Kurashima et al. show and disclose

The device as recited in Claim 19, wherein the pins include one of a pin strip, SMD pins, punched bent parts, and male pin connectors (43 is a pin strip, SMT pins, punched bent parts and male pin of the connector, fig. 1).

**Re Claim 22**, Kurashima et al. show and disclose

The device as recited in Claim 20, wherein each pin strip is pressed into the circuit substrate (a U-shaped clamping portion 43a having a predetermined clamping force, and the clamping portions 43a clamp the rear end of the circuit board 8 to properly mount the lead pins 43 on the circuit board 8 [col. 14, line 3 and line 7]).

**Re Claim 23**, Kurashima et al. show and disclose

The device as recited in Claim 20, wherein the SMD pins are soldered onto the circuit substrate and extend downwards via lateral edges of the carrier (fig. 2) to connect to a main board (of an optical communication system [col. 1, line 8]).

**Re Claim 24**, Kurashima et al. show and disclose

The device as recited in Claim 14, wherein the circuit substrate fastened to the carrier is able to be connected to the control unit via a flex foil (46c, fig. 3) and a plug connection (2a, fig. 3).

**Re Claim 27**, Kurashima et al. show and disclose

The device as recited in Claim 14, wherein the shakeproof accommodation is in a development as a second component set for a control unit (of an optical communication system [col. 1, line 8], the connect pin 34 of the module is connecting the optical communication system).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 15, 16, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurashima et al. in view of Tam (US5107404).

**Re Claim 15**, Kurashima et al. show and disclose

The device as recited in Claim 14,

Kurashima et al. does not disclose

an electrically insulating medium provided between the carrier and the circuit substrate.

Tam teaches a device wherein

an electrically insulating medium (a one side insulated copper foil [col. 6, line 46]) provided between the carrier and the circuit substrate.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the insulating foil as taught by Tam in the electronic device of Kurashima et al., in order to provide better insulation between the circuit board and the carrier, and to improve the reliability of the electronic device.

**Re Claims 16 and 25**, Kurashima et al. show and disclose

The device as recited in Claim 14,

Kurashima et al. does not disclose

wherein the circuit substrate is fastened to the carrier by one of a heat-dissipating adhesive, a laminated-on adhesive foil, screws, rivets and crimping; wherein the carrier has screw openings for a passage of especially fastening screws that are able to be screwed into a floor of a control unit.

Tam teaches a device wherein

the circuit substrate is fastened to the carrier by one of a heat-dissipating adhesive, a laminated-on adhesive foil, screws, rivets and crimping (by screw 45 and screw holes 47 and 43, fig. 1); the carrier has screw openings (47, fig. 1) for a passage of especially fastening screws (47, fig. 1) that are able to be screwed into a floor of a control unit (13, fig. 1).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the screws and screw holes as taught by Tam in the electronic device of Kurashima et al., in order to secure the circuit board and the carrier in the electronic device.

**Re Claim 26**, Kurashima et al. show and disclose

The device as recited in Claim 14,

Kurashima et al. does not disclose

wherein the carrier is made of cast aluminum.

Tam teaches a device wherein

the carrier is made of cast aluminum (cast aluminum [col. 3, line 14]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the cast aluminum carrier as taught by Tam in the electronic device of Kurashima et al., in order to make the carrier stronger and be able to integral with the heat sink of the electronic device. (Tam, col. 4, line 10)

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurashima et al. in view of Wakabayashi et al. (US20030086245).

**Re Claim 21**, Kurashima et al. show and disclose

The device as recited in Claim 20,

Kurashima et al. does not disclose

wherein the pin strip is situated on a tab, of the circuit substrate, which protrudes outwards over the carrier.

Wakabayashi et al. teaches a device wherein

the pin strip is situated on a tab (tab of the circuit board 550, where the connector 551 is mounted, fig. 2), of the circuit substrate, which protrudes outwards over the carrier.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the tab of the circuit board as taught by Tam for the pin strip in the electronic device of Kurashima et al., in order to easily connect the pin strip to the other device.



***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US-7207187 US-6655535 US-5611691 US-7345891 US-7171742 US-6493232 US-6147869 US-5359208 US-5091826.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to XIAOLIANG CHEN whose telephone number is (571)272-9079. The examiner can normally be reached on 7:00-5:00 (EST), Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800, ext 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dean A. Reichard/

Xiaoliang Chen

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Supervisory Patent Examiner, Art Unit 2841

Examiner  
Art Unit 2841